

In the Claims

1-9. (cancelled)

10. (new) A device for testing at least one quality parameter of a fluid in a fluid device at least periodically receiving a specified volume of fluid into at least one fluid space, comprising:

a storage device receiving and storing a volume of the fluid from the fluid device, and being a working cylinder having a piston side connected to the fluid space by a feed line and having a piston movable therein;

a control device being in fluid communication with said storage device via said feed line controlling flow of the fluid from the fluid device to said storage device;

a measurement device being in fluid communication with and downstream of said storage device via a drain line and being capable of determining a quality parameter of the fluid;

an actuating device connected to a rod side of said working cylinder for moving said piston in said working cylinder; and

a monitoring device operatively coupled to and indicating positions of said piston in said cylinder.

11. (new) A device according to claim 10 wherein

said monitoring device indicates end positions of said piston in said working cylinder.

12. (new) A device according to claim 10 wherein  
said actuating device comprises a source of compressed gas.
13. (new) A device according to claim 12 wherein  
said source comprises a compressed air nitrogen source.
14. (new) A device according to claim 10 wherein  
said actuator comprises one of the group consisting of an electrically and/or hydraulically  
operated supply source and a compressed gas source.
15. (new) A device according to claim 10 wherein  
said working cylinder comprises a pneumatic cylinder.
16. (new) A device according to claim 10 wherein  
the fluid device comprises one of the group consisting of working cylinders, hydraulic  
accumulators, valves, filter housings and flexible pressure tubing.
17. (new) A device according to claim 10 wherein  
said working cylinder comprises a piston rod with a through fluid conducting passage  
discharging on one side into a piston space of said working cylinder and on another side into a  
connecting line blocked by said control device.

18. (new) A device according to claim 17 wherein

said control device comprises switching valves located in and clearing and blocking said feed line and said connecting line; and

said control device is connected to said monitoring device to receive output signals from said monitoring device to actuate said switch valves in response to said output signals.

19. (new) A device according to claim 18 wherein

a pressure control valve is connected to said feed line between said working cylinder and the respective switching valve of said control device.

20. (new) A device according to claim 10 wherein

a second storage device and a second measurement device are in fluid communication with a second fluid space of the fluid device.

21. (new) A device according to claim 10 wherein

said measurement device determines at least one of particle size, particle number, particle speed and particle type present in the fluid, and of viscosity, aging, temperature, pH value and electric conductivity of the fluid.

22. (new) A device according to claim 21 wherein

the fluid device is a first hydraulic cylinder having a piston side and a rod side connectible to said working cylinder and said measurement device, said working cylinder being a pneumatic working cylinder; and

said control device permits replacement of the hydraulic cylinder with a new hydraulic cylinder to be tested while said measurement device determines fluid quality in one of said sides of the first hydraulic cylinder.

23. (new) A device according to claim 20 wherein

the fluid device is a first hydraulic cylinder having a piston side and a rod side forming the fluid spaces, respectively; and

said control device permits replacement of the first hydraulic cylinder with a new cylinder to be tested while said measurement device determines fluid quality in the first hydraulic cylinder.

24. (new) A device for testing at least one quality parameter of a fluid in a fluid device at least periodically receiving a specified volume of fluid into at least one fluid space, comprising:

first and second storage devices receiving and storing volumes of the fluid from the fluid device via feed lines;

a control device in fluid communication with said storage devices controlling flow of the fluid from the fluid device to said storage devices; and

first and second measurement devices in fluid communication via discharge lines with and downstream of said first and second storage devices, respectively, capable of determining a quality parameter of the fluid.

25. (new) A device according to claim 24 wherein

each said storage device has a monitoring device operatively coupled thereto indicating end positions of a piston movable within each said storage device.

26. (new) A device according to claim 24 wherein

an actuator comprising one of the group consisting of an electrically and/or hydraulically operated supply source and a compressed gas source is connected to a rod side of each said storage device.

27. (new) A device according to claim 24 wherein

each said storage device comprises a pneumatic cylinder.

28. (new) A device according to claim 24 wherein

the fluid device comprises one of the group consisting of working cylinders, hydraulic accumulators, valves, filter housings and flexible pressure tubing.

29. (new) A device according to claim 10 wherein

each said storage device comprises working cylinder having a piston rod with a through fluid conducting passage discharging on one side into a piston space of the respective working cylinder and on another side into a connecting line blocked by said control device.

30. (new) A device according to claim 29 wherein

said control device comprises switching valves located in and clearing and blocking said feed lines and connecting lines; and

said control device is connected to monitoring devices operatively coupled to said storage devices to receive output signals from said monitoring devices to actuate said switch valves in response to said output signals.

31. (new) A device according to claim 30 wherein

a pressure control valve is connected to each said feed line between the respective storage device and the respective switching valve of said control device.

32. (new) A device according to claim 24 wherein

said measurement devices determine at least one of particle size, particle number, particle speed and particle type present in the fluid, and of viscosity, aging, temperature, pH value and electric conductivity of the fluid.

33. (new) A device according to claim 32 wherein

the fluid device is a first hydraulic cylinder having a piston side and a rod side connectible to said storage devices and said measurement devices, said storage devices being pneumatic working cylinders; and

said control device permits replacement of the first hydraulic cylinder with a new hydraulic cylinder to be tested while said measurement devices determine fluid quality in said sides of the first hydraulic cylinder.

34. (new) A device for testing at least one quality parameter of a fluid in a fluid device at least periodically receiving a specified volume of fluid into at least one fluid space, comprising:

a storage device receiving and storing a volume of the fluid from the fluid device via a feed line;

a control device in said feed line in fluid communication with said storage device controlling flow of the fluid from the fluid device to said storage device; and

a measurement device in fluid communication via a discharge line with and downstream of said storage device capable of determining a quality parameter of the fluid, said quality parameter being at least one of particle size, particle number, particle speed and particle type in the fluid, and of viscosity, aging, temperature, pH value and electric conductivity of the fluid.

35. (new) A device according to claim 34 wherein

a monitoring device operatively coupled to storage device indicates end positions of a piston movably mounted in said storage device.

36. (new) A device according to claim 34 wherein

an actuator comprising one of the group consisting of an electrically and/or hydraulically operated supply source and a compressed gas source is connected to a rod side of said storage device.

37. (new) A device according to claim 34 wherein

said storage device comprises a pneumatic cylinder.

38. (new) A device according to claim 34 wherein

said storage device comprises a working cylinder having a piston rod with a through fluid conducting passage discharging on one side into a piston space of said working cylinder and on another side into a connecting line blocked by said control device.

39. (new) A device according to claim 38 wherein

said control device comprises switching valves located in and clearing and blocking said feed line and said connecting line; and

said control device is connected to a monitoring device operatively coupled to said storage device to receive output signals from said monitoring device and to actuate said switch valves in response to said output signals.

40. (new) A device according to claim 39 wherein

a pressure control valve is connected to said feed line between said working cylinder and the respective switching valve of said control device.



41. (new) A device according to claim 34 wherein

a second storage device and a second measurement device are in fluid communication with a second fluid space of the fluid device via another feed line.

42. (new) A device according to claim 34 wherein

the fluid device is a first hydraulic cylinder having a piston side and a rod side connectible to said storage device and said measurement device, said storage device being a pneumatic working cylinder; and

said control device permits replacement of the first hydraulic cylinder with a new hydraulic cylinder to be tested while said measurement device determines fluid quality in one of said sides of the first hydraulic cylinder.